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Conference Abstract

Parasites are Particularly Problematic

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Abstract

Although they are hyperdiverse and intensively studied, parasites present major challenges when it comes to phylogenetics, taxonomy, and biodiversity informatics. The collection of any parasitic organism entails the linking of at least two specimens - the parasite and the host. If the parasite has a complex life cycle, then this becomes further complicated by requiring the linking of three or more hosts, such as the parasite, its intermediate host (vector) and its definitive host(s). Parasites are sometimes collected as byproduct of another collection event and are not studied immediately - which has the potential to disconnect them further in terms of information content and continuity- and the converse if also common - parasites can be collected by parasitologists, who do not necessarily take host vouchers or incorporate host taxonomy, let alone other metadata for these events. Using the specific example of the malaria parasites (Order Haemosporida) I will present examples of the specific challenges that have accompanied the study of these parasites including issues of delimiting species, phylogenetic study, including genetic oddities that are unique to these organisms, and taxonomic quandries that we now find ourselves in, along with other problems with maintaining continuity of information in a group that is both diverse biologically and important medically.

Keywords

biodiversity informatics, biological interaction, linked data, parasite, *Plasmodium*, phylogenetics

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